GSM/GPRS/GPS Tracker

User Manual

Preface

Thank you for purchasing this product. This manual shows how to operate the device smoothly and correctly. Make sure to read this manual carefully before using this product. Please note that specification and information are subject to change without prior notice in this manual. Any change will be integrated in the latest release. The manufacturer assumes no responsibility for any errors or omissions in this document.

Content

1. Summary……...……...……2

2. Application……...……2

3. Hardware description……...…….....2

4. Specifications……4

5. How to use.....……...……4

6. Cautions……..13

7. Faults & Solutions……...……..14

1 Summary

This device works based on existing GSM/GPRS network and GPS satellites. It can be used to locate and monitor any remote targets by SMS or internet.

2 Applications

- Vehicle rental / Fleet management etc
- Protect child / the old / the disabled / pet etc
- Provide peace-of-mind for businessmen
- Manage personnel
- Track criminals secretly

3 Hardware Descriptions

3.1 Front face

3.2 Rear face

3.3 Side face

3.4 Bottom face

3.5 Interior

4 Specifications

Content	Specifications.
Dim.	78.4mm x 45.4 mm x 16.5mm
Weight	40g
Network	GSM/GPRS
Band	900/1800/1900Mhz or 850/900/1800/1900Mhz
GPS chip	SiRF III chip
GSM/GPRS module	SIMCOM 300 OR SIMCOM 340
GPS sensitivity	-159dBm
GPS accuracy	5m
Time To First Fix	Reacquisition 0.1s Cold status 45s Warm status 35s Hot status 1s
Car charger	12—24V input 5V output
Wall charger	110－220V input 5V output
Battery	Chargeable changeable 3.7V 1100mAh Li-ion battery
Standby	72hours
Storage Temp.	-40°C to +85°C
Operation Temp.	-20°C to +55°C
Humidity	5%--95% non-condensing

5 How to Use

5.1 SIM card installation

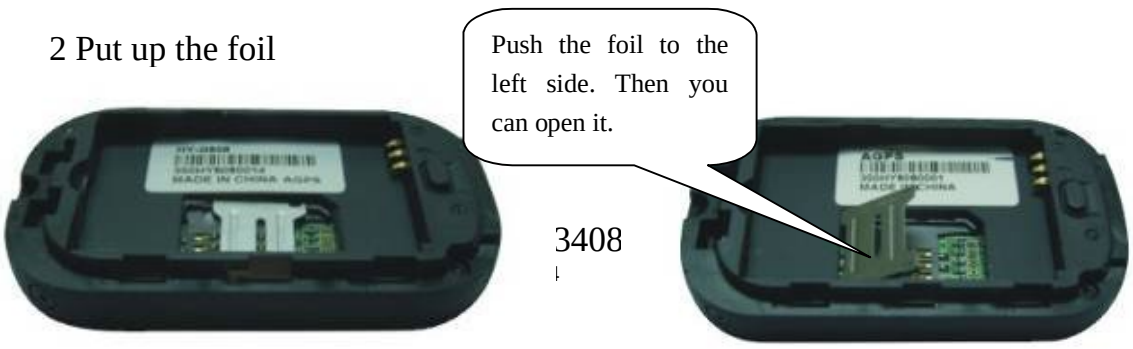
Make sure there is no **call transfer** and **call display on**, and keep **PIN code** off.

The message must be in Text format, can't be identified by PDU format.

Steps:

1 Open the rear cover, and take out the battery.

2 Put up the foil



3 Insert SIM card into the holder, put down the foil right and fasten it.

5.2 Battery and Charger

Please use the original battery and charger provided by the manufacturer. This device adopts built-in Li-ion battery, and full battery will support around 60 hours. Do charge the battery up 8 -12 hours for your first use. After first use, the battery can be charged fully in 3-5 hours.

Cautions:

a. For its Li-ion battery, which contains harmful chemicals and may burst, please keep it off fire and don't bump, puncture it violently.

b. Please charge the battery in time to keep it working normally.

5.3 Startup

- Put the SIM card and battery in its place. When the device is on, you can see the red indicator is on for about one minute. If you press the red button for a while, you will switch it off.
- The red button near "SOS" button is the "on/off" button.
- For first use, please initialize the device and restore it to default setting. (go to **5.4** for instruction.)
- There are three indicators on the device.

1. The blue indicator (on the left) shows the status of GPS. When it blinks

every two seconds, the GPS is standby. When the blue indicator is off, the tracker is working but doesn't get position yet. If the tracker gets the position, the blue indicator will be on all the time.

2. The blue indicator (in the middle) is the charge led. The indicator blinks means the device is on charge. After the device is full of electricity, the indicator will be on all the time.
3. The red indicator (on the right) represents GSM working status. Red indicator blinks, GSM is working. If you want to test the device, please put it outside of the window.

● Test this device by a mobile phone:

When the device receives GPS signals and GPS position normally, you can use it and do all the following settings.

5.4 Initialization

Send "begin+password" in SMS to the device, it will reply "begin ok" and initialize all the settings. (Default password: 123456)

5.5 Quick set up

5. 5. 1 Test device by mobile phone:

1. Send SMS "**telephone123456**" to the number (the SIM card number which you insert into the device). A message "**set telephone ok**." will be sent back to your mobile phone.
2. Send SMS "**tracker123456**" to the device. The same, a message "**tracker ok**" will be sent back.
3. Two ways to test the device.

a. Call the number (the SIM card number in the device), the device will cut

off by itself and begin to search the position. One minute later, no matter whether it has fixed position, the device will send back a message. If the device hasn't fixed position, it will keep searching for 4 minutes. During those 4 minutes, the device will send message back if it has fixed position. If not, it will not send message back.

b. Send SMS "**at30sum0**" to the device. You will get messages every 30 seconds. (The data sent back to you every time may be a little different, but it is ok, some error is permitted.) Cancel this function, please Send SMS "**noat+password**" to delete the auto track. For example password is **123456**: Send SMS "**noat123456**".

5. 5. 2 Test the device by GPRS Online platform:

For example, send the following SMS to set track platform.

1. **Send SMS: apn123456+space+apn code** to the device No. The device will reply SMS 'Set APN ok'. (Please note, different countries with different apn codes)
2. **Send SMS: number13412345678** to the device No. the **track platform** number would be have 11 digits. It will reply 'set number ok'. (Please note, 13412345678 is SIM number you put in device)
3. **Send SMS: IP119.147.23.100PORT2332** to the device No. The device will reply 'set IP address and PORT ok'. (Please note, 119.147.23.100 is the IP of your own server, 2332 is the port of your own server)
4. **Send SMS: web123456** to the device No., the device will reply 'set web ok
5. **Send interval SMS: at30sum0** to the device No. The device will reply

"Auto track set ok." 'AT30SUM0' means device replies the location intervals every 30 seconds. (Please note, 0 means detail times)

5. 5. 3 Monitor the voice of the device.

Send SMS: **monitor123456** to the device No. The device reply 'monitor ok', then you can monitor the voice.

Attention: In the model of Monitor, you can not get the location by call it, but you can send 'position' to get the location.

5.6 Change password

Send SMS "**password + old password + space + new password"** to change the password. Password only has **SIX** digits in all.

For example password is 123456: Send SMS:'Password123456 168168'

Remark: Be sure to keep the new password in mind, if you forget your password, you can send SMS '**resumepassword**' to resume the default password.

5.7 Authorization

There are only 4 numbers able to be authorized.

a. Call the tracker for 10 times, it will make the cell phone number as the authorized number automatically. You will receive SMS 'you are administrator'

b. Send SMS '**admin+password+space+cell phone number**' to set up an authorized number. The other authorized numbers should be set by the first authorized number. If the number is successfully authorized, the device will reply "admin ok!" in SMS.

For example password is 123456: Send SMS:'admin123456 13642345678'

c. Send SMS '**noadmin+password+space+authorized**' number to delete the

authorized number. If the setting is successfully, the device will reply "no administrator state" in SMS.

For example:'noadmin123456 13612345678'

d. If you are in a foreign country to set up your device, you should add the country code which your SIM card belongs to before the cell phone number.

For example password is 123456: Send SMS:'admin123456 0011231231234'

5.8 Real-time polling

a. If there is no authorized number, when any number dials up the device, it will report a Geo-info; If there is already an authorized number, then it will not respond when an unauthorized number calls it up.

b. When an authorized number dials up the device, it will hang up and report a real-time Geo-info as below:

c. When there is no GPS signal fixed, dialing up the device, it will reply the last fixed location as below:

5.9 Auto Track

Report a Geo-info at 30s (minute: m; hour: h) intervals to the authorized numbers for 5 times:

a. Set up: Send SMS '**at30sum15**' to the device, it will report the Geo-info at 30s intervals for 15 times. (s: second, m: minute, h: hour). The setting must be in 5 digits and at maximum 65535 in value.

b. Send SMS 'at60sum0'to the device, it will reply SMS heaps of times

c. Cancel: Send SMS '**noat+password**' to delete the auto track .For example For example password is 123456: Send SMS'noat123456'

5.10 Voice Surveillance

In this mode, the user can dial up the device to monitor the voice (please refer to **5.9** for instruction).

5.11 Modes switch between "track" and "monitor"

a. The default mode is "**track**".

b. Send SMS '**monitor+password**' to the device, and it will reply "**monitor ok**!" and switch to "monitor"mode. For example password is123456, Send SMS:'monitor123456'

c. Send SMS **'tracker+password**' to the device, it will reply "**tracker ok**!" and restore to "track" mode. For example password is 123456: Send SMS 'tracker123456'

5.12 Geo-fence

Set up a geo-fence for the device to restrict its movements within a district. The device will send message to the authorized numbers when it breaches the district.

a. Set up: When the device stays immobile in a place for 3-10 minutes, the user can Send SMS **'stockade+password+space+latitude,longitude; latitude,longitude**' to the device to set the restricted district. In case of breach, it will send SMS "**stockade!+geo-info**" to the authorized numbers.

For example password is 123456: Send SMS "stockade123456 22.548123,114.081234; 22.549123,114.082234"to the device.

Remark: The first latitude & longitude is coordinate of the top left corner of the Geo-fence, while the second latitude & longitude is the coordinate of the bottom right corner. It will alarm one time in each setting.

b. Cancel: Send SMS '**nostockade+password**' to deactivate this function. This function will be out of effect after the device moves outside the district.

5.13 Movement alert

a. Set up: When the device stays immobile in a place for 3-10 minutes, the user can send SMS' **move+password**' to the device, then the device will reply "move ok!". In case of such a movement, it sends SMS "Move" along with a Geo-info to the authorized numbers. It will alarm one time in each setting.

b. Cancel: Send SMS '**nomove+password**' to deactivate the movement alert.

Remark: This function will be out of effect after the device moves outside the district.

5.14 Overspeed alert:

a. Set up: Send SMS '**speed+password+space+080'** to the device (suppose the speed is 80km/h), and it will reply "speed ok!". When the target moves exceeding 80 km/h, the device will send SMS speed+080!+Geo-info to the

authorized numbers. It will alarm one time in each setting.

b. Cancel: Send SMS '**nospeed+password**' to deactivate the over-speed alert

5.15 IMEI checking:

Send SMS **imei+password** to the device to check the IMEI number.

For example: Send imei123456 to the device

5.16 SOS button

Press the SOS for 3 second, it will send "**help me!+ Geo-info** "to all the authorized numbers every 3 minutes for 3 times. It will stop sending such a SMS when one of the authorized number reply SMS "**help me!**" to the tracker.

5.17 Low battery alert

It begins to alert when it is 3.7V and send you SMS in 30m interval.

SMS format: **low battery+Geo-info.**

5.18 Hidden number tracking

When a hidden authorized number calls the tracker, the tracker will reply SMS with the hidden number&Geo-info to all the authorized numbers.

a. Send SMS "**hide number**" to set up the hidden number.

b. Send SMS "**nohide number**" to delete the hidden number.

5.19 SMS center

a. Send SMS **adminsms+password+space+cell phone number** to set the SMS center.

b. If the SMS center is set up, when an authorized number sends SMS to the tracker, the tracker will reply a SMS with **Geo-info & authorized number** to SMS center.

c. Send SMS **noadminsms+password** to cancel the SMS center. Response SMS format: **authorized number+Geo-info**

5.20 Set up GPRS

The user needs to set IP address and Port by SMS to start the function of GPRS.

Set up: Send SMS **ip+space+IP address+space+port**, and it will reply SMS "set **IP address and Port OK**"

For example: Send SMS "ip 123.98.43.254 port2456"to the device

5.21 Set up Sending data mode for GPS.

Set up Sending data mode for GPS, and then it can send GPS data to IP address. (Refer to5.21).

After this setting, you can call or send SMS to the tracker. The tracker will hand up the call and reply SMS "**Serial number+authorized number+GPRMC+command+IMEI number+CRC16 "**to IP address.

5.22 Modes switch between "telephone" and "web"

For sending GPS data to your IP address, you should set up the sending mode for GPS data.

Set up: Send SMS **web+password** to device. For example, password is 123456.Send SMS "**web123456**"to the device, if you set successfully, the device will reply SMS "**set web ok**'. After this, you can call or send SMS to the tracker. The tracker will hang up the phone and report the GPS data to IP address.

If you want to send GPS data to a telephone, you can send SMS **telephone+password** to the device. If set successfully, the device will reply '**set telephone ok**'. And then, the device will send GPS data to your telephone by

SMS. (The default is sending the GPS data to the telephone by SMS)

5.23 Set APN

For sending GPS data to IP address, you should set up mobile network Access Point Name (APN).If you don't know the APN, you can consult local network service supplier. The format of set APN is **apn+password+space+APN**, after set up successfully; the device will reply SMS "Set APN ok"

For example password is 123456, Send SMS 'apn123456 cmnet' to the device.

6 Cautions

Please comply with the instructions to extend the device life:

1. Keep the device dry. Any liquid, i.e. rain, moisture, may destroy or damage the inside circuitry.
2. Don't use & store the device in dusty places.
3. Don't put the device in overheated or overcooled places.
4. Handle carefully. Don't vibrate or shake it violently.
5. Clear the device with a piece of dry cloth. Don't clean in chemicals, detergent.
6. Don't paint the device, this may cause some foreign materials left in between the parts.
7. Don't disassemble or refit the device.
8. Please use the battery and charger provided by manufacturer. Using other batteries and chargers will cause unwanted situation.
9. Don't dismount the antenna randomly, or use other antennas. This may interfere the transmission, and increase the radiation as well.

7 Faults & The solutions

Faults	Solution
Startup Fail	Check the battery and see if it is fully charged or correctly installed.
Hangup Fail	In existence of an authorized number, an unauthorized Number dials up the device. Please initialize the device and re-set up the authorized numbers.
Monitor Fail	Check if the authorized number is setup or in the coverage of signals.
Location report in digits of zeros.	Don’t use it in the place beyond reach of signals. Place the device outdoors, especially when starting it up.